

PTO/SB/81 (09-03)  
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and  
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INDICATION FORM**

Application Number	09/808,852
Filing Date	June 18, 2001
First Named Inventor	Tatsuro NAGAHARA
Title	Photosensitive Polysilazane Co
Art Unit	1752
Examiner Name	LEE, Sin J.
Attorney Docket Number	PN4104US

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Applicant/Inventor.

☒

Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/98)

SIGNATURE of Applicant or Assignee of Record

Name	Dr. Traudel Kachholz	Dr. Dieter Dünwald
Signature	<i>Traudel Kachholz</i>	<i>Dieter Dünwald</i>
Date	October 7, 2003	Telephone 0041 61 469 5247

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☐ \*Total of \_\_\_\_\_ forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PTO/SB/86 (04-03)

Approved for use through 04/30/2003. OMB 0851-0031  
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**STATEMENT UNDER 37 CFR 3.73(b)**Applicant/Patent Owner: Tatsuro Nagahara, Hideki Matsuo, Tomoko Aoki, Kazuhiro YamadaApplication No./Patent No.: 09/806,852Filed/Issue Date: June 18, 2001Entitled: Photosensitive Polysilazane Composition and Method of Forming Patterned Polysilazane FilmClariant International Ltda Swiss Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.  
The extent (by percentage) of its ownership interest is \_\_\_\_\_ %  
in the patent application/patent identified above by virtue of either:

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: TATSURO NAGAHARA, HIDEKI MATSUO To: TONEN GENERAL SEKIYU K.K.  
The document was recorded in the United States Patent and Trademark Office at  
Reel 013471, Frame 0875, or for which a copy thereof is attached.
2. From: TOMOKO AOKI, KAZUHIRO YAMADA To: TONEN GENERAL SEKIYU K.K.  
The document was recorded in the United States Patent and Trademark Office at  
Reel 013471, Frame 0875, or for which a copy thereof is attached.
3. From: TONEN GENERAL SEKIYU K.K. To: CLARIANT INTERNATIONAL LTD  
The document was recorded in the United States Patent and Trademark Office at  
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☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.

**[NOTE:]** A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See

MPEP 302.08)

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

October 7, 2003

Date

0041 61 469 5247

Telephone number

Dr. T. KachholzDr. D. Dünwald

Typed or printed name



Signature

Head of Industrial Patent Attorney

Property Department

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETE D FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

## U.S. ASSIGNMENT

IN CONSIDERATION of the sum of One Dollar (\$1.00), and of other good and valuable consideration paid to the undersigned inventor(s) (hereinafter "ASSIGNOR") by

(Insert  
ASSIGNEE's  
Name(s)  
Address(es))

Tonen General Sekiyu K.K.

16-1, Kaigan 1-chome, Minato-ku, Tokyo 105-8572 Japan

(hereinafter "ASSIGNEE"), the receipt of which is hereby acknowledged, the undersigned ASSIGNOR hereby sells, assigns and transfers to ASSIGNEE the entire and exclusive right, title and interest in the invention entitled

(Title of  
Invention)

PHOTOSENSITIVE POLYSILAZANE COMPOSITION AND METHOD OF

FORMING PATTERNED POLYSILAZANE FILM

relating to International Patent Application PCT/JP 99 / 05498 and/or for which application for Letters Patent of the United States was executed on even date herewith or, if not so executed, was

(Insert date  
of execution  
of application,  
if not  
concurrent)

(a) executed on \_\_\_\_\_

(b) filed on \_\_\_\_\_  
Serial No. \_\_\_\_\_ / \_\_\_\_\_

Anderson, Kill & Olick, P.C.,  
New York


\_\_\_\_\_ is hereby authorized to insert in (b) the specified  
date, when known.

and to said application and all Letters Patent(s) of the United States granted on said application and any continuation, division, renewal, substitute, reissue or reexamination application based thereon, for the full term or terms for which the said Letters Patent(s) may be granted and including any extensions thereof (collectively, hereinafter, "said application(s) and Letters Patent(s)").

The ASSIGNOR agree(s), when requested by said ASSIGNEE and without charge to but at the expense of said ASSIGNEE, to do all acts which the ASSIGNEE may deem necessary, desirable or expedient, for securing, maintaining and enforcing protection for said invention, including in the preparation and prosecution of said application(s) and the issuance of said Letters Patent(s), in any interference, reissue, reexamination, or public use proceeding, and in any litigation or other legal proceeding which may arise or be declared in relation to same, such acts to include but not be limited to executing all papers, including separate assignments and declarations, taking all rightful oaths, providing sworn testimony, and obtaining and producing evidence.

IN WITNESS WHEREOF, the undersigned inventor(s) has (have) affixed his/her/their signature(s).

(Signature)

1	 (SIGNATURE)	<u>Tatsuro Nagahara</u> (TYPE NAME)	<u>May 18, 2001</u> (DATE)
2	<u>松尾泰樹</u> (SIGNATURE)	<u>Hideki Matsuo</u> (TYPE NAME)	<u>May 18, 2001</u> (DATE)
3	<u>安部 倫子</u> (SIGNATURE)	<u>Tomoko Aoki</u> (TYPE NAME)	<u>May 18, 2001</u> (DATE)
4	<u>山田 一博</u> (SIGNATURE)	<u>Kazuhiro Yamada</u> (TYPE NAME)	<u>May 18, 2001</u> (DATE)
5	_____ (SIGNATURE)	_____ (TYPE NAME)	_____ (DATE)
6	_____ (SIGNATURE)	_____ (TYPE NAME)	_____ (DATE)
7	_____ (SIGNATURE)	_____ (TYPE NAME)	_____ (DATE)
8	_____ (SIGNATURE)	_____ (TYPE NAME)	_____ (DATE)

## ASSIGNMENT

USA

DATE: *July 9, 2003*

### **PARTIES:**

- (1) TonenGeneral Sekiyu K.K., at 16-1, Kaigan 1-chome, Minato-ku, Tokyo, Japan  
("ASSIGNOR")
- (2) Clariant International Ltd, at Rothausstrasse 61, CH-4132 Muttenz, Switzerland  
("ASSIGNEE")

### **RECITALS:**

The ASSIGNOR is recorded at the United States Patent Office as the proprietor in respect of the U.S.-patent applications and patents listed on the attached sheets.

### **OPERATIVE TERMS:**

The ASSIGNOR hereby assigns to the ASSIGNEE its entire right including the right to collect for past damages, title and interest and the ASSIGNEE hereby confirms its acceptance from the ASSIGNOR of the ownership and benefit of the PATENTS, the title and interest therein and all the rights, powers, liberties and immunities arising or accrued therefrom to the extent that the PATENTS shall be in the name of and shall vest in the ASSIGNEE to hold unto the ASSIGNEE.

IN WITNESS of which the parties have executed this Agreement on the date shown at the beginning of this Agreement.

TonenGeneral Sekiyu K.K.

Clariant International Ltd

By:

*Chihiro Imai*

Chihiro Imai  
Manager, Patent Group Logistics Support  
Department

By:

*T. Kachholz*

Dr. T. Kachholz  
Head of Industrial

*Dr. Diester*

Dr. Diester Dümmwald  
Patent Attorney

## 1) U.S.-Patents

No.	New Ref. No.	Title of the invention	Date of filing	Registered date	Registered patent number	Applicant
1	FN 1228US	INORGANIC POLYSILAZANE AND METHOD OF PRODUCING THE SAME	26-Nov-85	20-Jun-89	4840778	TonenGeneral Sekiyu K.K.
2	FN 1401US	POLYORGANO(HYDRO)SILAZANE AND PROCESS FOR PRODUCING SAME	09-Apr-86	21-Apr-87	4859850	TonenGeneral Sekiyu K.K.
3	FN 1417US1	PROCESSES FOR PRODUCING POLYSILOXAZANES AND SILICON OXYNITRIDE FIBERS	12-Feb-87	28-Sep-89	4869858	TonenGeneral Sekiyu K.K.
4	FN 1417US2	POLYSILOXAZANES, SILICON OXYNITRIDE FIBERS AND PROCESSES FOR PRODUCING SAME	19-Jul-88	23-Oct-90	4965058	TonenGeneral Sekiyu K.K.
5	FN 1417US3	POLYSILOXAZANES, SILICON OXYNITRIDE FIBERS AND PROCESSES FOR PRODUCING SAME	18-Jul-90	7-Jan-92	5078323	TonenGeneral Sekiyu K.K.
6	FN 1417US4	POLYSILOXAZANES, SILICON OXYNITRIDE FIBERS AND PROCESSES FOR PRODUCING SAME	08-Sep-91	24-Nov-92	5166104	TonenGeneral Sekiyu K.K.
7	US890010	POLYMETALOSILAZANE AND PROCESS FOR PREPARING SAME	17-Mar-89	12-Dec-89	4886860	TonenGeneral Sekiyu K.K.
8	FN 1972US	POLYBOROSILAZANE AND PROCESS FOR PRODUCING SAME	18-Jan-90	9-Jul-91	5030744	TonenGeneral Sekiyu K.K.
9	FN 2834US	THERMOSETTING COPOLYMERS, SILICON CARBIDE-BASED FIBER AND PROCESSES FOR PRODUCING SAME	18-Jun-92	8-Mar-94	5292830	TonenGeneral Sekiyu K.K.
10	FN 3383US	POLYMETALOSILAZANE, PROCESS OF PRODUCING SAME, SILICON NITRIDE BASED CERAMIC, AND PROCESS OF PREPARING SAME	06-Apr-94	25-Jul-95	5436388	TonenGeneral Sekiyu K.K.
11	FN 3078US	MODIFIED POLYSILAZANE AND PROCESS FOR PREPARATION THEREOF	30-Nov-94	27-Feb-96	5494978	TonenGeneral Sekiyu K.K.
12	FN 3869US	SILICON-CONTAINING COPOLYMER AND METHOD OF PRODUCING SAME	18-Aug-95	21-Jan-97	5596062	TonenGeneral Sekiyu K.K.
13	FN 3742US	METHOD AND COMPOSITION FOR FORMING CERAMICS AND ARTICLE COATED WITH THE CERAMICS	13-Oct-95	5-May-98	5747623	TonenGeneral Sekiyu K.K.
14	FN 3994US	PROCESS FOR THE PRODUCTION OF POLYSILAZANE	06-Jan-97	18-May-98	5905130	TonenGeneral Sekiyu K.K.
15	FN 4060US	POLYORGANOSILOXAZANE AND METHOD OF PREPARING THE SAME	28-Dec-97	4-Jan-00	6011187	TonenGeneral Sekiyu K.K.
16	FN 3825US	COMPOSITION FOR CERAMIC SUBSTANCES AND PROCESS FOR PRODUCING CERAMIC SUBSTANCES	15-Jul-98	13-Jul-99	5922417	TonenGeneral Sekiyu K.K.
17	FN 4024US	AMINATED POLYSILAZANE AND PROCESS FOR THE PREPARATION THEREOF	10-Aug-98	30-Oct-01	6,310,168	TonenGeneral Sekiyu K.K.
18	US980001	METHOD AND COMPOSITION FOR FORMING CERAMICS AND ARTICLE COATED WITH THE CERAMICS	12-Jan-98	4-Jul-02	6,083,880	TonenGeneral Sekiyu K.K.

## 2) Patent applications

No.	New Ref. No.	Title of the invention	Date of filing	Application number	Publication number	Applicant
1	FN 4104US	PHOTOSENSITIVE POLYSILAZANE COMPOSITION AND METHOD OF FORMING PATTERNED POLYSILAZANE FILM	05-Oct-99	09/806852	WO00/20927	TonenGeneral Sekiyu K.K.
2	FN 4109US	METHOD FOR SEALING FINE GROOVE WITH SILICEOUS MATERIAL AND SUBSTRATE HAVING SILICEOUS COATING FORMED THEREON	23-Oct-02	10/258285	-	TonenGeneral Sekiyu K.K.
3	FN 4141US	POROUS SILICA COATING WITH LOW DIELECTRIC CONSTANT, SEMICONDUCTOR DEVICE AND COATING COMPOSITION	20-Jun-00	10/009,735	-	TonenGeneral Sekiyu K.K.
4	FN 4141DUS	POROUS SILICA COATING WITH LOW DIELECTRIC CONSTANT, SEMICONDUCTOR DEVICE AND COATING COMPOSITION	24-Feb-03	10/370538	-	TonenGeneral Sekiyu K.K.